Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

Properties of Ionic, Covalent, and Metallic Bonds

Characterize each property as ionic (I) or covalent (C).

1. \_\_\_\_\_\_\_ 2 nonmetals
2. \_\_\_\_\_\_\_ Conducts electricity
3. \_\_\_\_\_\_\_ Crystalline solids
4. \_\_\_\_\_\_\_ Electrons are shared
5. \_\_\_\_\_\_\_ Electrons are transferred from cation (metal) to anion (metal)
6. \_\_\_\_\_\_\_ Hard
7. \_\_\_\_\_\_\_ High melting point
8. \_\_\_\_\_\_\_ Low boiling point
9. \_\_\_\_\_\_\_ Made of cations and anions
10. \_\_\_\_\_\_\_ Metal + nonmetal
11. \_\_\_\_\_\_\_ More soluble in water
12. \_\_\_\_\_\_\_ Poor conductors of electricity
13. \_\_\_\_\_\_\_ Soft
14. Magnesium bromide is a(n) \_\_\_\_\_ compound
    1. Metallic
    2. Covalent
    3. Ionic
    4. None of the above
15. How is the bond in F2 different from the bond in KCl?
    1. F2 is covalent and KCl is ionic
    2. F2 is ionic and KCl is ionic
    3. F2 is ionic and KCl is covalent
16. An atom that has gained or lost electrons becomes a(n)
    1. Electron
    2. Proton
    3. Isotope
    4. Ion
17. Nonmetals tend to \_\_\_\_\_ electrons to become \_\_\_\_\_.
    1. Lose, positive
    2. Gain, negative
    3. Lose, neutral
    4. Gain, positive
18. When a sodium atom loses one electron, it gets a charge of \_\_\_\_\_\_
    1. +1
    2. -1
    3. 0
    4. +2
19. Hydrogen monofluoride has a(n) \_\_\_\_\_\_\_\_ bond and its chemical formula is \_\_\_\_\_\_\_\_.
    1. Covalent, HF
    2. Ionic, HF
    3. Covalent, H2F